| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/026,061 | 12/18/2001 | Ira Cohen | 10006656 | 8586 |

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| EXAMINER |
|---|
| BARQADLE, YASIN M |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2153 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/026,061 | COHEN ET AL. |
| | Examiner | Art Unit | |
| | YASIN M. BARQADLE | 2153 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>19 December 2007</u>.

2a)☒ This action is **FINAL**.     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>11,12,15-23 and 26-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>11-12,15-23, and 26-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## Response to Amendment

The amendment filed on December 19, 2007 has been fully considered but are
not deemed persuasive.

- Claim 1-10 have been previously cancelled

- Claims 11-12, 15-23, 26-29 are pending.


## Response to Arguments

In response to Applicant's argument regarding the 101 rejection the Examiner
notes that claiming a hardware system in the preamble without showing a
physical hardware in the claimed limitations do not change the scope of the
claims being non-statutory. Therefore, the 101 rejection of claims 21-29 is
maintained.


In response to Applicant's argument that 'Bauer, the learning rate is not
increased or decreased as recited in claim 11 but set to a value:


While the value of $n^*$ cannot be computed, evidence acquired when applying
EM(n) algorithms to other learning tasks shows that certain values of n seem to
work well for most problems .... These experiments indicate that a value of n =
1.8 appears to work well, and certainly much better than n = 1. (See Bauer at
p. 2, column 1, fourth full paragraph).

Examiner respectfully disagrees. Baur for example teaches "Our update rule for the t 2 distance results in a family of update rules with varying learning rates n. This family, which we denote EM(n), includes the standard EM algorithm [6, 8] as the special case EM(l). From the relative entropy distance, we derive an analogous family of multiplicative update rules which, following [ 12, 10], we call EG(n). In particular, we show in Section 4 that, while l is the largest value of n for which convergence to a local maximum is guaranteed, some value n~ which is bigger than 1 provides the optimal convergence rate. More precisely, for any (local or global) maximum of the likelihood function, there is a value n~ > I and a neighborhood around the local maximum, such that EM(n) provides the fastest convergence (of any EM(n) algorithm) to the maximum in that neighborhood." (Page 2 paragraph 3-4). The fact the one value appears to work well it is does not mean the learning rate does not increase or decrease as argued by the Applicant. It just says that some value bigger that 1 provides an optimal convergence. See convergence property section on page 5 and page 10 paragraphs 1-4. See also err graphs in fig. 3 top of page 9).

## *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-29 are rejected under 35 U.S.C. 101 because the claimed invention
is directed to non-statutory subject matter.

Claims 21-29 calls for "a system", which is a program per se not tangibly stored
in a computer readable storage medium so to be executable by a computer
system. On page 7, line 25 the specification reads, " The on-line environment
50 may be the hardware/software elements of an email system, an e-commerce
system, ... or any type of distributed application to name a few." (Page 5, lines
25-28). Thus, the elements of the system reasonably indicate software, such
that the system is software per se. Therefore, claims 21-29 are rejected as been
directed to a non-statutory subject matter (i.e., software per se).

### Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent
> therefor, subject to the conditions and requirements of this title.

Claims 11-15 and 20-26 are rejected under 35 U.S.C. 101 because the claimed
invention is directed to non-statutory subject matter.

Each of claims 11-15 and 20-26 appears to be an abstract idea rather than a
practical application of the idea. Each of claims 11-15 and 20-26 does not
result in a physical transformation nor does it appear to provide a useful,

concrete and tangible result. Therefore, claims 11-15 and 20-26 are rejected as

being directed to a non-statutory subject matter (i.e., abstract idea).


*Claim Rejections - 35 USC § 102*



The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in

this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or
> in public use or on sale in this country, more than one year prior to the date of application for
> patent in the United States.


Claims 11-12,15-16 and 20-23 and 26 are rejected under 35 U.S.C. 102(b) as

being anticipated by "In Proceedings of the Thirteen Annual Conference on

Uncertainty in Artificial Intelligence (UAI-97), pages 3-13, Providence, Rhode

Island, august 1-3, 1997, Eric et al.


As per claims 11 and 21, Eric et al teach a method and system for adapting a

Bayesian network (abstract), comprising the steps of:

generating a set of parameters of the Bayesian network in response to a

set of past observation data such that the Bayesian network models an

environment (page 1, ¶ 7 and page 2, sec. 2.1 ¶ 16);

obtaining a set of present observation data from the environment (page 7,

¶ 51-52 and page 9, ¶ 59);

determining an estimate of the parameters in response to the present

observation data;

adapting a learning rate for the parameter such that the learning rate

responds to changes in the environment indicated in the present observation

data (page 2, ¶ 10-13; page 4, ¶ 29-30 and page 10 ¶ 64), by increasing the

learning rate when an error between the estimate and a mean value of the

parameters is relatively large and decreasing the learning rate when

convergences is reached between the estimate and the mean value of the

parameters (pages 2, sec 2.1 ¶ 16-21 and pages 6, ¶ 41-46. See convergence

property section on page 5 and page 10 paragraphs 1-4. See also err graphs in

fig. 3 top of page 9);

updating the parameters in response the present observation data using

the learning rate (page 2, ¶ 10-11 and page 4, ¶ 29-30); and

using the Bayesian network to model the environment and diagnose

problems or predict events in the environment (abstract)


As per claims 12 and 22, Eric et al teach the method and the system of claims

11 and 21, wherein adapting comprises adapting a different learning rate for

each parameter of the Bayesian network (page 2, ¶ 10-12; page 4, ¶ 29-30 and

page 7, ¶ 50-52).

As per claims 15 and 26, Eric et al teaches the method and the system of

claims 11 and 21, wherein a subset of values in the present observation data is

unavailable when updating (pages 2, ¶ 16-22 and pages 6, ¶ 59-60).


As per claim 16, Eric et al teaches the method of claim 11, wherein the

environment is an online environment (pages 6, ¶ 59-60).


As per claims 20 and 23, Eric et al teaches the method and the system of

claims 11 and 21, wherein updating comprises determining an initial set of the

parameters and then updating the parameters in response to the present

observation data using the learning rate (page 2, ¶ 10-11 and page 4, ¶ 29-30).


### Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis

for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.


Claims 17-19 and 27-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Eric et al (UAI-97 publication) in view of Bronstein U.S.

Publication No. (20030018494).

As per claim 17, 18 and 27-28 Eric et al teach the invention as discussed

above. However, Eric et al do not explicitly teach wherein the online

environment is an email system or e-commerce system.

Bronstein whose invention is about assessing health of a subsystem or service

within a networked system using probabilistic reasoning network such as

Bayesian network (abstract and ¶ 0063 and 0068), discloses assessing the

health of a network services including an e-mail service and an e-commerce

service (¶ 0030-0031). Giving the teaching of Bronstein, a person of ordinary

skill in the art at the time of the invention would have readily recognized the

advantage of modifying Eric by employing the probabilistic reasoning network

of Bronstein so as to provide an overall health assessment of network elements

such as email and ecommerce system using a very general modular

architecture (see FIG. 3). "This reduces the customization effort. This in turn

minimizes the engineering cost of providing health assessment for software,

hardware, or services." (¶0012 and ¶0035-0036).


As per claims 19 and 29, Bronstein teaches the invention, wherein the online

environment is a database system (¶ 0036; ¶0049-0051).

## Conclusion

**ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the

extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

**THREE MONTHS** from the mailing date of this action. In the event a first reply

is filed within **TWO MONTHS** of the mailing date of this final action and the

advisory action is not mailed until after the end of the **THREE-MONTH**

shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In

no event, however, will the statutory period for reply expire later than **SIX**

**MONTHS** from the date of this final action.

The prior made of record and not relied upon is considered pertinent to

applicant's disclosure.

Any inquiry concerning this communication or earlier communications

from the examiner should be directed to Yasin Barqadle whose telephone

number is 571-272-3947. The examiner can normally be reached on 9:00 AM

to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The

fax phone numbers for the organization where this application or proceeding is

assigned are 703-872-9306 for regular communications and 703-746-7238 for

After Final communications.

Any inquiry of a general nature or relating to the status of this

application or proceeding should be directed to the receptionist whose

telephone number is 703-305-3900.

Information regarding the status of an application may be obtained form

the Patent Application Information Retrieval (PAIR) system. Status information

for published applications may be obtained from either private PAIR or public

PAIR system. Status information for unpublished applications is available

through private PAIR only. For more information about the PAIR system, see

http://pair-direct.uspto.gov. Should you have questions on access to the

Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

YB

Art Unit 2153

/Yves  Dalencourt/

Primary Examiner, Art Unit 2157